



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,322	04/19/2004	Michiya Inoue	392.1893	1067
21171	7590	03/28/2008		
STAAS & HALSEY LLP			EXAMINER	
SUITE 700			WANG, JUE S	
1201 NEW YORK AVENUE, N.W.				
WASHINGTON, DC 20005				
			ART UNIT	PAPER NUMBER
			2193	
			MAIL DATE	DELIVERY MODE
			03/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/826,322

Applicant(s)

INOUE ET AL.

Examiner

JUE S. WANG

Art Unit

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 and 4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/19/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1, 3, and 4 have been examined.
2. Claims 2, 5, and 6 were cancelled in Amendment dated 12/21/2007.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Omron, "CX-Programmer User Manual", in view of Albrecht, "PLC Programming with XSoft 2.2", further in view of PLCDirect, "DL405 Handheld Programmer Manual Number D4-HP-M".

5. As per claim 1, Omron teaches the invention as claimed, including a sequence program editing apparatus comprising:

program storage means storing a sequence program (see pages 23-29, section "Writing a Ladder Program", pages 55-56, section "Opening and Saving Projects");

duplication detecting means for detecting duplication of the same signal name (see pages 18-21, section "Introducing Symbols and the Symbol Table", pages 71-72, section "Copying and Pasting Symbols", pages 74-75, section "Pasting Symbols with Errors");

display means for displaying duplicated signal names detected by said duplication detecting means (see pages 74-75, section “Pasting Symbols with Errors”);

selection means for allowing selection of signal names to be rewritten in the duplicated signal names displayed in said display means (see pages 74-75, sections “Editing Symbols”, “Pasting Symbols with Errors”); and

signal name rewriting means for rewriting signal names in the duplicated signal names displayed by the display means to eliminate the duplication of the same signal name (see pages 74-75, sections “Editing Symbols”, “Pasting Symbols with Errors”).

Omron does not explicitly teach that the same signal names detected by the duplication detection means are assigned for different coils in the sequence program.

Albrecht teaches a sequence program editing apparatus including duplication detecting means for detecting duplication of the same signal name assigned for different coils in the sequence program stored in a program storage device (see pages 2-25, 5-5, 5-30, page 10-117, error 3703; EN: coils are associated with variables which has identifiers and identifiers can not be declared to have duplicate definitions).

It would have been obvious to one of ordinary skill in the art at the time of the invention that the duplication detection means of Omron also detects duplicate signal names that are assigned for different coils in the sequence program because Omron teaches that symbol names are assigned to coils and symbol names must be unique within its table (see page 19-20 of Omron), and it would have been obvious to one of ordinary skill in the art that the duplicate definitions for an identifier being detected (see pages 5-5 and 10-117 of Albrecht) is a situation where the identifier is not unique.

Omron and Albrecht do not teach displaying the locations of the duplicated signal names in the sequence program.

PLCDirect teaches displaying locations of duplicated coil refs in the sequence program (see page 3-18).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Omron and Albrecht to display locations of the duplicated signal names in the sequence program as taught by PLCDirect because it is well known in the art that providing the location of the error facilitates the programmer in correcting the error.

6. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omron, "CX-Programmer User Manual", in view of Albrecht, "PLC Programming with XSoft 2.2", further in view of PLCDirect, "DL405 Handheld Programmer Manual Number D4-HP-M", as applied to claim 1 above, further in view of Zifferer et al. (US 5,267,145, hereinafter Zifferer).

7. As per claim 3, Omron further teaches signal rewriting means for renaming contacts for the coils to which the same signal name is assigned (see pages 18-21, section "Introducing Symbols and the Symbol Table", pages 71-72, section "Copying and Pasting Symbols", pages 74-75, sections "Editing Symbols", "Pasting Symbols with Errors").

Omron, Albrecht, and PLCDirect do not teach renaming-range setting means for setting a range renaming the contacts in the sequence program.

Zifferer teaches a renaming-range setting means for setting a range of renaming the contacts in a sequence program (see column 7, line 61 – column 8, line 4, column 9, line 15 –

column 10, line 26; EN: the rename range is limited by limiting the search range as the signal name is only replaced for symbols found in the search limited by the search range).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Albrecht, PLCDirect, and Omron with a renaming-range setting means for setting a range of renaming the contacts in the sequence program as taught by Zifferer because it allows the user to limit the search and replace function to the current ladder logic program file or to include all ladder logic program files (see column 7, line 61 – column 8, line 4).

8. As per claim 4, Zifferer further teaches the renaming-range setting means allows to set the renaming range for a divided unit of a main program and subprograms of the sequence program (see column 7, line 61 – column 8, line 4, column 9, lines 1-14).

Response to Arguments

9. Rejection of claim 1 under 35 U.S.C. §103(a):

10. As per claim 1, Applicants' arguments have been fully considered and are moot in light of the new grounds of rejection.

Conclusion

11. Applicants' amendment necessitated the new ground(s) of rejection presented in this office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP §706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jue S. Wang whose telephone number is (571) 270-1655. The examiner can normally be reached on M-Th 7:30 am - 5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on 571-272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lewis A. Bullock, Jr./
Supervisory Patent Examiner, Art Unit 2193

Jue Wang
Examiner
Art Unit 2193